

Comments: FCC WT 05-235

Date: August 2, 2005

As both an amateur radio operator and professional electrical engineer I disagree with the Commissions stance regarding the total elimination of the morse code requirement for all amateur radio operator licenses, and ask that the ARRL petition to keep the morse code requirement for the amateur extra class be reconsidered. This disagreement is founded with two arguments that I believe the FCC has not considered: that continuous wave (CW) transmissions of morse code is inherently the most basic form of digital communication, and as such it is an important part of basic communication fundamentals of future communications, and as such should be retained; and two, due to morse codes low data (information) rate (in the order of 100-500 bits per second), it has great value to amateur services in that it is usable under the lowest power and greatest path loss communication links.

In support of the first argument is the fact that amateurs are required to pass a theoretical exam that involves many basic analog modes of communication such as AM, FM, and Single-Sideband transmission theory, regardless of their interest in using these modes of transmission. These are analog modes, and since radio privileges are granted using these modes, some fundamental understanding has been deemed necessary. In a reasonable extension of this philosophy, the inherently basic digital mode of CW transmissions using morse code should exist if for no other reason that to install an understanding of the digital radio coding, given the current and future propensity and privileges granted for digital modes in advanced communications.

Furthermore, as ohms law is an inherent basic in circuit theory, so too is morse code to data communications. By its binary nature, morse code has served as a model for basic binary communications that are now ingrained in everything from computers to refrigeration control. Being a basic fundamental in communication, it appears only natural that morse code be understood by someone granted the highest class of amateur radio license.

In education, a solid foundation of fundamentals serves as a platform for further education. So too is morse code. As an example, children are taught fundamentals of American and world history in school for many reasons; however, one could argue that on the surface, knowing what happened in the distant past has no bearing on our life today. The latter would appear to be the Commission's stance, if we apply their rationale of morse code relevancy to today's communication system as discussed in WT 05-235. However, just as many others would agree that knowing history does serve many important fundamentals, such as in comprehension of modern policy, an understanding

of human nature, and the knowledge of the consequences of ones actions, so too does morse code serve as an important fundamental as it relates to digital communication systems.

In support of the second argument, the basis of amateur radio is in experimentation and communication. Propagation modes such as moonbounce, sporadic-E, meteor scatter and others within weak signal environments have served to pioneer advances in communication for both military and commercial benefits. Morse code through CW transmissions are arguable the modulation of choice from an amateur perspective in a weak signal arena since it is the method that requires the least amount of power (or allows the most amount of path loss) to complete a 2-way communication link regardless of the propagation mode. This is based on the fundamentals of link budget analysis. These experimentations form the very fabric for amateur radio's existence, as well as leading the way to help develop into data "burst" modes of communication that are used today in military and commercial systems.

In conclusion, I disagree with FCC WT Docket #05-235 and the NPRMs that will totally eliminate the morse code requirements from the extra class license requirements, for the reasons given herein. I ask that the plan to retain the morse requirement for the amateur extra class licensee, as submitted by the ARRL, be reconsidered by the FCC.

Sincerely,

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